

# **Five-Year Review Report**

## **Second Five-Year Review Report**

**for**

**Southern Shipbuilding Corporation Superfund Site  
Slidell, St. Tammany Parish, Louisiana**

**September 2005**

**Region 6  
United States Environmental Protection Agency  
Dallas, Texas**



197012

## Five-Year Review Memorandum

**Southern Shipbuilding Corporation Superfund Site  
CERCLIS ID# LAD008148015  
Slidell, St. Tammany Parish, Louisiana**

This U.S. Environmental Protection Agency (EPA) memorandum documents the performance, determinations, and approval of the Southern Shipbuilding Corporation Superfund Site ("SSC site" or "the site") Second Five-Year Review Report prepared by EPA-Region 6.

### Summary of Five-Year Review Findings

The remedy for the Southern Shipbuilding Corporation Superfund Site in Slidell, St. Tammany Parish, Louisiana was chosen to remove principal health threats that presented excess lifetime cancer risk and prevent further actual or threatened releases of hazardous substances from the site. The site was cleaned up under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) 42 U.S.C. §9601 *et seq.*, as two operable units. In Operable Unit 1, materials containing polynuclear aromatic hydrocarbon (PAHs) concentrations above 10 parts per million (ppm) benzo(a)pyrene (BAP) equivalents and sediments containing tributyltin concentrations greater than 80 parts per billion (ppb) were removed and incinerated at the nearby Bayou Bonfouca Superfund Site, under a determination by the Regional Administrator of EPA Region 6 to treat the two Superfund sites as one, under section 104(d)(4) of CERCLA. The residual ash was returned to the SSC site and buried under a clay cap. Soils containing PAH concentrations between 1 and 10 ppm BAP equivalents were excavated and disposed of on-site under the clay cap. Soils containing concentrations of arsenic greater than 30 ppm, lead greater than 2,000 ppm, and polychlorinated biphenyls greater than 10 ppm were excavated and disposed of off-site. Asbestos containing materials (ACM) were also excavated and disposed of off-site. All affected areas were backfilled and re-graded. Operations and maintenance at the site consists of routine site inspections to ensure clay cap integrity. Site inspections and interviews with parties associated with the site show that the cap is effectively preventing exposure to the wastes that remain at the site. The site is currently inactive, but future land use is expected to present some reuse negotiations and issues. The Record of Decision (ROD) for Operable Unit 2 (OU2), which provides no further remedial action, contemplated continued light industrial use at the site in arriving this determination. However, in the event that a change in use of the site was considered, the ROD recommended that the City of Slidell control such development through zoning and construction requirements; and it made specific recommendations for additional remedial measures in such event, such as installation of two feet of additional clean soil as a cover with controls on the disposition of excavated materials. The site owner has indicated that he plans to have the property rezoned and to redevelop the property for commercial and residential purposes. The City of Slidell and some residents apparently support such

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development. According to the City, there may be some other residents who prefer a green belt use for the property. In the event that the EPA decides to require appropriate institutional controls or other remedial action in connection with such development or otherwise, an Amended ROD should be published.

The trigger for this second five-year review was the actual start of construction in September 1995, and the first Five-Year Review Report in September 2000. As of the site inspection accomplished in July 2005 and other site documentation, the remedial action at the site as originally set forth in the Record of Decision was implemented as planned and it appeared to continue to be protective of human health and the environment. However, on August 28-29, 2005, the Slidell Louisiana area, as well as the Greater New Orleans area and Mississippi Gulf Coast were severely impacted by the Category IV (Saffir/Simpson Scale) Hurricane Katrina. This storm caused unprecedented catastrophic destruction due to high winds and an unparalleled storm surge. In the Slidell area, the Bayou Bonfouca which empties into the northeast sector of Lake Pontchartrain, was informally reported to have incurred a storm surge of as much as 12 feet well upstream. Because of the national disaster response of unprecedented proportions in this area of Louisiana, as of the finalization of this Five-Year Review Report, conditions and damage at the site other than site security were unknown. An interagency response team attempted to enter the facility on September 13, 2005; but, it could not gain entry due to the absence of the landlord and the effectiveness of site perimeter security. An inspection and additional studies as necessary will be conducted, consistent with the exigencies of the national disaster response. If necessary, appropriate response actions will be taken or required to address site conditions.

### **Actions Needed**

The recommended actions below address the issues necessary to ensure protectiveness. This includes potential site damages incurred from Hurricane Katrina, as well as the possibility of the property's use changing from light industrial to commercial and/or residential purposes. Furthermore, these actions will also address the matter pertaining to some minor erosion areas in the cap at the site. The performance of these actions, in the circumstances described, will be needed to ensure future remedy protectiveness:

- A site inspection, along with any required analytical sampling, evaluation, and analysis, will be undertaken as soon as possible, consistent with the exigencies of the national disaster response to Hurricane Katrina;
- Take and/or require appropriate response action to address site damage incurred as a result of Hurricane Katrina. In the event that no damage has been incurred to the on-site clay cap, then work closely with the site owner to ensure and oversee the repair of some minor erosional features and maintenance of the on-site clay cap, which could affect the protectiveness of the next Five-Year Review;

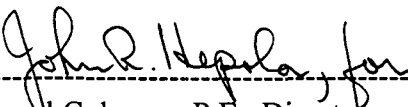
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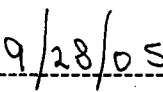
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- Work closely with the site owner, the Louisiana Department of Environmental Quality (LDEQ), and the City of Slidell when tangible reuse proposals and redevelopment plans are submitted, to ensure the site remains protective of human health and the environment;
- In the event of an approved proposal for redevelopment of the site through the "Ready for Reuse (RfR)" process or otherwise, that involves the requirement for institutional controls or other remedial measures at the site, an Amended ROD must also be initiated and approved by the EPA, since the 1997 ROD called for no further action;
- Require the developer of the site to ensure implementation of any necessary institutional controls as needed to change the use status of the site, to ensure the protection of remedial components, or for other reasons;
- Oversee the enforcement of any newly required institutional controls at the SSC Site; and
- Due to frequent and extreme meteorological events in the area, continue annual inspection of the site until the September 2010 Five-Year Review, or until the site is approved by EPA as RfR and redeveloped according to RfR approved plans.

**Determinations**

I have determined that the remedy for the Southern Shipbuilding Corporation Superfund Site, Slidell, St. Tammany Parish, Louisiana, cannot be found to be protective of human health and the environment at this time. In order to ensure both short- and long-term protectiveness, the performance of the action items as described above and in this Five-Year Review Report must be appropriately addressed.

  
-----  
Samuel Coleman, P.E., Director  
Superfund Division  
U.S. Environmental Protection Agency Region 6

  
-----  
Date


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Second Five-Year Review Report  
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CONCURRENCES

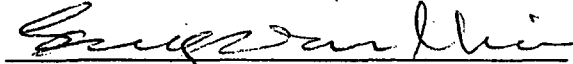
Five-Year Review

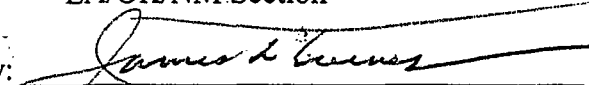
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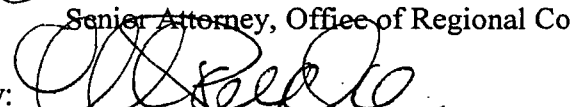
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CERCLIS ID# LAD008148015

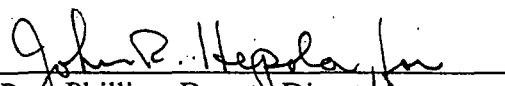
By:  Date: 09/20/2005  
Michael Torres  
Remedial Project Manager

By:  Date: 09/20/2005  
Sing Chia, Chief  
LA/OK Section

By:  Date: 09/23/2005  
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Superfund Branch, Office of Regional Counsel

By:  Date: 09/28/05  
Pam Phillips, Deputy Director  
Superfund Division

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## List of Acronyms

ACM	Asbestos-containing material
ARARs	Applicable or Relevant and Appropriate Requirements
BAP	Benzo(a)Pyrene
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CWA	Clean Water Act
EE/CA	Engineering Evaluation/Cost Analysis
E&E	Ecology and Environment (EPA contractor)
ERB	Emergency Response Branch
EPA	United States Environmental Protection Agency
FR	Federal Register
LDEQ	Louisiana Department of Environmental Quality
LDR	Land Disposal Restrictions
NCP	National Contingency Plan
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
O&M	Operation and Maintenance
OSWER	Office of Solid Waste and Emergency Response
OU	Operable Unit
PAH	Polynuclear Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
ppb	parts per billion
ppm	parts per million
RA	Remedial Action
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation/Feasibility Study
RPM	Remedial Project Manager
ROD	Record of Decision
SARA	Superfund Amendments and Reauthorization Act
SSC	Southern Shipbuilding Corporation Superfund Site
TAT	Technical Assistance Team
TBCs	To Be Considereds
USACE	United States Army Corps of Engineers
USCG	United States Coast Guard

## Executive Summary

The remedy for the Southern Shipbuilding Corporation Superfund Site (“SSC site” or “the site”) in Slidell, St. Tammany Parish, Louisiana was chosen to remove principal health threats that presented excess lifetime cancer risk, and prevent further actual or threatened releases of hazardous substances from the site. The site was cleaned up under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. §9601 *et seq.*, as two operable units. In Operable Unit 1, materials containing polynuclear aromatic hydrocarbon (PAHs) concentrations above 10 parts per million (ppm) benzo(a)pyrene (BAP) equivalents and sediments containing tributyltin concentrations greater than 80 parts per billion (ppb) were removed and incinerated at the nearby Bayou Bonfouca Superfund Site, under a determination by the Regional Administrator of the United States Environmental Protection Agency (EPA) Region 6 to treat the two Superfund sites as one, under section 104(d)(4) of CERCLA. The residual ash was returned to the SSC site and buried under a clay cap. Soils containing PAH concentrations between 1 and 10 ppm BAP equivalents were excavated and disposed of on-site under the clay cap. Soils containing concentrations of arsenic greater than 30 ppm, lead greater than 2,000 ppm, and polychlorinated biphenyls greater than 10 ppm were excavated and disposed of off-site. Asbestos containing materials were also excavated and disposed of off-site. All affected areas were backfilled and re-graded. Operations and maintenance at the site consists of routine site inspections to ensure clay cap integrity. Site inspections and interviews with parties associated with the site show that the cap is effectively preventing exposure to the wastes that remain at the site. The site is currently inactive, but future land use is expected to present some reuse negotiations and issues. The Record of Decision (ROD) for Operable Unit 2 (OU2) which required no further remedial action contemplated continued light industrial use at the site in arriving at this determination. However, in the event that a change in use of the site was considered, the ROD recommended that the city of Slidell control such development through zoning and construction requirements; and it made specific recommendations for additional remedial measures in such an event, such as installation of two feet of additional clean soil as cover with controls on the disposition of excavated materials. The site owner has indicated that he plans to have the property rezoned and to redevelop the property for commercial and residential purposes. The city of Slidell and at least one nearby resident apparently support such development. In the event that the EPA decides to require appropriate institutional controls or other remedial action in connection with such development or otherwise, an Amended ROD should be published.

The trigger for this second five-year review was the actual start of construction in September 1995, and the first Five-Year Review report in September 2000. As of the site inspection accomplished in July 2005 and other site documentation, the remedial action at the

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site as originally set forth in the ROD had been implemented as planned and it appeared to continue to be protective of human health and the environment. However, on August 28-29, 2005, the Slidell, Louisiana area, as well as the Greater New Orleans area and Mississippi Gulf Coast were stricken by the Category IV (Saffir/Simpson Scale) Hurricane Katrina. This storm caused unprecedented catastrophic destruction due to high winds and an unparalleled storm surge. In the Slidell area, the Bayou Bonfouca, which empties into the northeast part of Lake Pontchartrain, was informally reported to have incurred a storm surge of as much as 12 feet well upstream. Because of the national disaster response of unprecedented proportions in this area of Louisiana, as of the finalization of this report, conditions and damage at the site other than site security were unknown. An interagency response team attempted to enter the facility on September 13, 2005; however, it could not gain entry due to the absence of the landlord and the effectiveness of site perimeter security. An inspection and additional studies as necessary will be conducted, consistent with the exigencies of the national disaster response. If necessary, appropriate response action will be taken or required to address site conditions.

## Five-Year Review Summary Form

### SITE IDENTIFICATION

Site name (from WasteLAN): Southern Shipbuilding Corporation

EPA ID (from WasteLAN): LAD008148015

Region: VI	State: LA	City/County: Slidell, St. Tammany Parish
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### SITE STATUS

NPL status: Final  Deleted Other (specify) \_\_\_\_\_

Remediation status (choose all that apply): Under Construction    Operating    Complete

Multiple OUs? <input checked="" type="checkbox"/> YES    NO	Construction completion date: <u>08</u> / <u>29</u> / <u>1997</u>
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Has site been put into reuse?    YES    NO

### REVIEW STATUS

Lead agency: EPA  State    Tribe    Other Federal Agency \_\_\_\_\_

Author name: Michael Torres

Author title: Remedial Project Manager	Author affiliation: EPA Region VI
--	-----------------------------------

Review period: 09 / 30 / 2000 to 09 / 30 / 2005

Date(s) of site inspection: \_\_\_ / \_\_\_ / \_\_\_    April & June 2005

Type of review:

Statutory Review	Post-SARA Non-NPL Remedial Action Site Regional Discretion	Pre-SARA NPL-Removal only NPL State/Tribe-lead
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Review number:    1 (first)    2 (second)     3 (third)    Other (specify) \_\_\_\_\_

Triggering action:

Actual RA Onsite Construction at OU # _____	XX Actual RA Start at OU# <u>1</u>
Construction Completion	Previous Five-Year Review Report
Other (specify) _____	

Triggering action date (from WasteLAN): 09 / 30 / 2000

Due date (five years after triggering action date): 09 / 30 / 2005

\* ("OU" refers to operable unit.)

\*\* [Review period should correspond to the actual start and end dates of the Five-Year Review in WasteLAN.]

### Five-Year Review Summary Form, cont'd

#### Issues

As stated in the September 1997 ROD, the site remedy is protective for light industrial use. The ROD contemplated the maintenance of then current site zoning requirements by the city of Slidell, but recommended that in the event that residential uses were to be permitted on the site, two feet of additional clay soil cover, along with control of excavated materials should be required by the city of Slidell through zoning and construction permit requirements. At present, the site is not used for any activity except routine and minimal maintenance of the fence and grounds. There was no evidence of preparations for construction and development of facilities necessary for reuse.

According to Mr. Steven Siegler, Managing Director of Equity Development Systems Ltd., there are ongoing discussions with the city of Slidell to work towards a reuse resolution. Mr. Siegler also indicated to the EPA, the Louisiana Department of Environmental Quality (LDEQ), and the city of Slidell officials that his company is moving forward with proposed plans to redevelop all of the Southern Shipbuilding Corporation site for possible residential and commercial purposes. The city of Slidell and its community members and the site owner are interested in returning the site into the commercial and residential stream of commerce, rather than for light industrial reuse. Further evaluation of the site and the necessary administrative and remedial actions shall occur if the current land use is proposed for zoning change.

#### Recommendations and Follow-up Actions:

- A site inspection, along with any required analytical sampling, evaluation, and analysis, will be undertaken as soon as possible, consistent with the exigencies of the national disaster response to Hurricane Katrina;
- Take and/or require appropriate response action to address site damage incurred as a result of Hurricane Katrina. In the event that no damage has been incurred to the on-site clay cap, then work closely with the site owner to ensure and oversee the repair of some minor erosional features and maintenance of the on-site clay cap, which could affect the protectiveness of the next Five-Year Review;
- Work closely with the site owner, LDEQ, and the city of Slidell when tangible reuse proposals and redevelopment plans are submitted, to ensure the site remains protective of human health and the environment;

- In the event of an approved proposal for redevelopment of the site through the “Ready for Reuse (RfR)” process or otherwise, that involves the requirement for institutional controls or other remedial measures at the site, an Amended ROD must also be initiated and approved by the EPA, since the 1997 ROD called for no further action;
- Require the developer of the site to ensure implementation of any necessary institutional controls as needed to change the use status of the site, to ensure the protection of remedial components, or for other reasons;
- Oversee the enforcement of any newly required institutional controls at the SSC site; and
- Due to frequent and extreme meteorological events in the area, continue annual inspection of the site until the September 2010 Five-Year Review or until the site is approved by EPA as RfR and redeveloped according to RfR approved plans.

#### **Protectiveness Statement**

The remedy conducted at the Southern Shipbuilding Corporation Superfund Site cannot be found to be protective of human health and the environment at this time. As of July 2005, the clay cap that was installed over an area where incinerator ash and contaminated soils were placed continued to maintain its structural integrity. The site was fenced and locked on the landward side, and a post hurricane reconnaissance indicated that the site was still secure, but could not be accessed for inspection. Although access is available from the Bayou Bonfouca waterway, it did not appear, as of July 2005, that any trespassing had occurred on-site. The clay layer that was placed near the edge of the bayou had not sustained any major erosional damage, as of July 2005. Furthermore, based on the site interviews, the site inspections, and the data review, it appeared in July 2005 that the remedy was functioning and protective as intended in the ROD. No new laws or regulations have been promulgated or enacted that would call into question the effectiveness of the remedy at the SSC site. However, because of the tremendous damage inflicted in the site vicinity and elsewhere in the greater New Orleans area by Hurricane Katrina, and informal reports of damage as noted herein, the remedy cannot be found to be protective at this time. The EPA will have the site inspected and take appropriate followup action, as soon as possible, consistent with the exigencies of the disaster response and circumstances in the area of the site.

### **Long-term Protectiveness**

The remedy conducted at the Southern Shipbuilding Corporation Superfund Site cannot be found to be protective of human health and the environment at this time. This determination is due to the uncertain, but potentially serious destructive effects of Hurricane Katrina on the site, which are unknown at this time. See the discussion of this subject elsewhere in this report below. Should site reuse or property zoning change, the compatibility of the remedy and redevelopment activity will need to be assessed to ensure continued long-term protection of human health and the environment.

## I. INTRODUCTION

The purpose of five-year reviews is to determine whether the remedy at a site is protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in Five-Year Review reports. In addition, Five-Year Review reports identify issues found during the review, if any, and recommendations to address them.

The United States Environmental Protection Agency (EPA or Agency) is preparing this Five-Year Review pursuant to section 121 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). CERCLA § 121 states:

*If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgement of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.*

The agency interpreted this requirement further in the NCP; 40 CFR §300.430(f)(4)(ii) states:

*If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.*

EPA Region 6 conducted the second Five-Year Review of the remedy implemented at the Southern Shipbuilding Corporation (SSC) Superfund Site (SSC site, the site, or facility) in Slidell, Louisiana. This second review was conducted by the Remedial Project Manager (RPM) for the entire site from March 2005 through September 2005. This report documents the results of the review. This is the second Five-Year Review Report for the SSC site. The triggering action for this statutory review is the initiation of the remedial action in August 1995 and the first Five-Year Review Report in September 2000.



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**II. SITE CHRONOLOGY**

DATE	EVENT
August 1992	Louisiana Department of Environmental Quality (LDEQ) investigates possible release of materials from the site sludge pit into Bayou Bonfouca
December 1992	EPA and LDEQ investigate the stability of site sludge pits and threat of contaminant releases
July 1993	EPA, United States Army Corps of Engineers (USACE), and LDEQ conduct site inspections and USACE determines a imminent threat and substantial endangerment at the site
July 26 - September 1, 1993	EPA initiates an Emergency Removal Action to pump down liquid levels in the sludge pits and provide additional freeboard
May 18 - September 27, 1994	EPA conducts a time-critical removal action to again pump down liquid levels in the sludge pits and construct a fence around the site
July - October 1994	Engineering Evaluation/Cost Analysis (EE/CA) conducted
November 1994 - May 1995	EPA conducts a time-critical response action to install sheet piling around the levees
March 1, 1995	EE/CA Report issued by EPA
March 1995 - September 1996	Removal Action conducted to remove drums, tanks, containers, their contents, and related contamination from the site
May 10, 1995	Site included on the National Priorities List (NPL)
July 20, 1995	ROD for OU1 signed
July 26, 1995	OU1 ROD Amended under CERCLA 104(d)(4) to permit the incineration of SSC site waste at the nearby Bayou Bonfouca Superfund Site
September 1995	Remedial Action (RA) for OU1 begins

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September 1995 - April 1996	Remedial Investigation/Feasibility Study (RI/FS) for OU2 conducted
April 10 - May 28, 1996	"Fraction A" contaminated soils excavated from OU2 and sent to Bayou Bonfouca Superfund Site for on-site incineration
April 23 - June 27, 1996	Excavation and disposal of "Fraction B" contaminated soils from OU2 areas
August 1996	RI report for OU2 issued by EPA
September 1996	FS report for OU2 issued by EPA
September 30, 1996	Incineration of site wastes ends at Bayou Bonfouca Superfund site
June 1997	Clay cover in OU1 area expanded and completed
June 1997 - August 1997	Excavation and disposal of asbestos-containing materials from OU2
September 15, 1997	No-action ROD for OU2
June 16, 1998	Site deleted from NPL
August 1998	First annual inspection completed
June 1999	Second annual inspection completed
September 2000	First Five-Year Review and Third annual inspection completed
May 22, 2001	Fourth annual inspection completed
2002	Fifth annual inspection completed
2003	Sixth annual inspection completed
2004	Seventh annual inspection completed
April and September 2005	Second Five-Year Review and eighth annual inspection completed
August 28-29, 2005	Category IV Hurricane Katrina strikes Slidell, Louisiana, as well as the Greater New Orleans area, and Louisiana, Mississippi, and Alabama Gulf Coast

### **III. BACKGROUND**

#### **Physical Characteristics**

The Southern Shipbuilding Corporation Superfund Site operated as a ship and barge construction and repair facility, and also conducted "gas freeing" and barge cleaning operations from 1919 to 1993. The SSC site is situated on approximately 55.8 acres of land located in Township 9S, Range 14E, Section 44 (30° 16'21" north latitude and 89° 48'03") as shown in Figure 1. The site is located at 999 Canulette Road in Slidell, St. Tammany Parish, Louisiana. The property is currently owned by Equity Development Systems Limited (EDS) in New Orleans, Louisiana.

The Southern Shipbuilding Corporation site is surrounded by residential areas to the west and south. Approximately 27,000 residents live in the surrounding community. The nearest residence potentially impacted by the site is approximately 400 feet from the site, to the southwest. The southeastern portion of the site is heavily wooded and is bounded by State Highway 433. The northern and eastern boundaries of the site is Bayou Bonfouca. Across Bayou Bonfouca to the north, the land use is both residential and commercial.

#### **Land and Resource Use**

Residential development has been encroaching on the Southern Shipbuilding Corporation Site over the last 40 years (E&E, 1995). Approximately 7,052 people lived within a one-mile radius of the site at the time the Record of Decision for Operable Unit 1 was signed (EPA, 1995). The nearest municipal water well is located 1.25 miles southwest of the site. The uppermost useable aquifer is the Shallow Aquifer, which is located approximately 75 feet below the land surface at the site. The site is situated within the 100-year flood plain, and the elevation is less than 10 feet above mean sea level.

#### **History of Contamination**

The facility was founded in 1919 by David and Frank Canulette and incorporated as the Canulette Shipbuilding Company (Canulette) in 1920. During and after World War II, Canulette constructed vessels for the U.S. Navy. In 1954, the site was purchased and operated by the J&S Shipbuilding Corporation (J&S). J&S was acquired by the Seligman family in 1957, and its corporate name was changed to the Southern Shipbuilding Corporation. Operations at the site included "gas freeing" (or the control of vapor buildup associated with cargo bearing barges), barge cleaning, ship construction and repairing operations. The Southern Shipbuilding

Corporation filed a petition for bankruptcy and ceased operations in 1993. The site included a graving dock where maintenance operations occurred and two sludge pits that were used to dispose of wastes pumped from vessels. Use of the sludge pits is believed to have ceased by 1972. Waste drums, containers, contaminated debris, scrap metal piles, and abandoned equipment were reported to have been scattered across the site. Contamination at the site resulted from the disposal of wastes in the sludge pits and poor waste management practices at the facility. Investigations determined those solid wastes and hazardous substances had been disposed of on the ground and in buildings at various locations across the site (EPA, 1997, and EPA, 1995).

The Southern Shipbuilding facility was issued two Compliance Orders by the Louisiana Department of Natural Resources (predecessor to the Louisiana Department of Environmental Quality [LDEQ]) in 1984 and 1987, respectively. These orders were related to unauthorized discharges (1984) of contaminants from the sludge pits and sampling and reporting requirements (1987) under the site's Clean Water Act (CWA) National Pollutant Discharge Elimination System (NPDES) permit. All permits associated with discharges from the site had expired by October 1992 (EPA, 1997).

In August 1992, the LDEQ attempted to investigate a complaint regarding the release of contaminants from the sludge pits, but access to the site was denied. Three days later it was discovered that the levees around the sludge pits had failed, and 325,000 gallons of materials were released into Bayou Bonfouca. The levees had been repaired, using sand bags. The LDEQ issued a third Compliance Order to Southern Shipbuilding, directing it to stop all unauthorized discharges and to comply with pollution control laws (EPA, 1993).

### **Initial Response**

The site was identified to the EPA in December 1992 after the U.S. Coast Guard (USCG) had investigated a citizen complaint. The USCG discovered oily material seeping into the bayou. An investigation conducted by the EPA Emergency Response Branch (ERB) and the EPA Technical Assistance Team (TAT) between December 1992 and July 1993 determined that the north sludge pit was releasing material into the bayou. Inspections of the levees around the sludge pits, performed by the U.S. Army Corps of Engineers (USACE), EPA, TAT, and LDEQ, led to the conclusion that potential catastrophic failure of the levees was an imminent and substantial endangerment to human health and the environment (EPA, 1993).

In 1993 and 1994, the EPA ERB initiated two removal actions at the site to pump down water levels within the sludge pits and treat the discharge waters. In 1994-95, the EPA and USACE installed sheet piling around the levees to abate the threat of the pits releasing into

Bayou Bonfouca. Also, in 1994-95, an Engineering Evaluation/Cost Evaluation (EE/CA) was conducted utilizing the EPA TAT, Ecology and Environment, Inc. (E&E) to support decision-making regarding appropriate removal actions. Procedures to add the site to the National Priorities List (NPL) were initiated, and the site was added to the NPL on May 10, 1995. The site was divided into two Operable Units (OU) for investigation and response purposes. OU1 consisted of the area of the facility around the graving dock and the sludge pits (approximately 11 acres); OU2 comprised the rest of the site (EPA, 1997). Figure 2 shows the boundaries between the operating units.

The EE/CA performed in 1994 to support the removal actions was based on extensive investigative work that conformed to the requirements of a Remedial Investigation/Feasibility Study (RI/FS) for OU1; and thus, it was able to be used similarly to an RI/FS, in support of developing the Proposed Plan and Record of Decision (ROD) for OU1. The RI/FS for OU2 was conducted during 1995 and 1996 (E&E, 1996b, and E&E, 1996c).

The EE/CA determined that the soils and sludge located in and around the sludge pits were extensively contaminated with polynuclear aromatic hydrocarbons (PAHs). The sediments in the graving dock were determined to be extensively contaminated with tributyltin (E&E, 1995). The OU2 RI/FS determined that 30 areas of soil within OU2 were contaminated with PAHs, polychlorinated biphenyls (PCBs), lead, and arsenic (EPA, 1997). It was also later determined that several locations were contaminated with asbestos-containing material (ACM) (E&E, 1997). The sediments in Bayou Bonfouca were determined to contain low levels of contamination that could not be directly linked to the site. The shallow unconfined aquifer beneath OU2 at the site was determined to not be impacted (E&E, 1995, and E&E, 1996c). The principle threats posed by the site were determined to be direct exposure to hazardous substances, pollutants, or contaminants that pose a threat to human health or the environment, and the potential migration of contamination away from source areas (EPA, 1995 and EPA, 1997).

In summary, the site assessment and removal action investigations by EPA showed the following types of contamination at the site:

- Low-impact contaminated surface and subsurface soil in the proximity of the impoundments area extending from the surface down to about 10 feet;
- High-impact contaminated sludge and soils in the impoundments and overflow areas, and soil in close proximity to these areas;
- Contamination to sediments within and immediately near the graving area (dry dock); and

- Low-impact contamination in sediments of Bayou Bonfouca.

The site was divided in two Operable Units: OU1 comprised the surface impoundments and graving dock; OU2 comprised the remaining 45 acres. OU2 was contaminated with metals, organic compounds, and ACM in several areas. These waste contaminants were addressed by removal actions for each contaminated area.

In 1996, approximately 1,072 cubic-yards of oily sludge from the OU2 area were blended with OU1 oily waste and incinerated at the nearby Bayou Bonfouca Superfund Site. The residual ash was then disposed in the SSC on-site landfill. In addition, 5,000 cubic yards of contaminated soil that was characterized as non-hazardous was excavated and disposed off-site at the Woodside Landfill. In 1997, about 300 cubic yards of soils contaminated with ACM was also disposed at the Woodside Landfill (EPA, 1997 and E&E, 1997). Also, approximately 2,000 cans, containers, and drums were removed from the site during the April 1995 removal action (EPA, 1997).

### **Basis for Taking Action**

#### **Contaminants**

Hazardous substances that have been released at the site in each media include:

##### Soil

PAHs [Benzo(a)Pyrene equivalents]  
Total PCBs  
Lead  
Arsenic

##### Bayou Bonfouca Sediment

Arsenic  
Barium  
Beryllium  
Cobalt  
Lead  
Tributyltin

#### IV. REMEDIAL ACTIONS

##### Remedy Selection

Two RODs for remedial action were signed for this site. The ROD for OU1 was signed on July 20, 1995, and the selected remedy included:

- Excavation of contaminated soil and sludge containing carcinogenic polynuclear aromatic hydrocarbons (PAHs) greater than 10 parts per million (ppm) Benzo(a)pyrene (BAP) equivalents, transportation of the excavated materials to the Bayou Bonfouca Superfund Site located 1.5 miles upstream, and incineration of the contaminated materials at the Bayou Bonfouca Superfund Site;
- Excavation of the graving dock sediments contaminated with tributyltin greater than 80 parts per billion (ppb), transportation of the excavated materials to the Bayou Bonfouca Superfund Site located 1.5 miles upstream, and incineration of the contaminated material at the Bayou Bonfouca Superfund Site;
- After incineration at the Bayou Bonfouca Superfund Site, transportation of the residual ash back to the SSC site and disposal under a two foot clay cap on-site;
- Excavation of soils contaminated with carcinogenic PAHs between 1 and 10 ppm BAP equivalents and disposal under the SSC site clay cap;
- Backfilling and grading all excavated areas;
- Groundwater monitoring; and
- Access controls and warning signs.

The remedial action goal for PAHs of 1 ppm BAP equivalents was established based on a risk assessment. This concentration represents an excess carcinogenic risk within the range of  $10^{-4}$  to  $10^{-5}$ . The risk assessment assumed a future residential scenario. No non-carcinogenic risks above a Hazard Index of 1 were found at OU1.

The ROD for OU2 was signed on September 15, 1997, and it recommended no further response at the site. This recommendation was based on the fact that the contaminated portions of OU2 had been addressed through previous removal actions conducted along with the removal

actions at OU1. Based on a risk assessment assuming future use as light industrial, consistent with current city of Slidell zoning requirements, the remedial action goals established for OU2 were 10 ppm BAP equivalents for PAHs, 2,000 ppm for lead, 30 ppm for arsenic, and 10 ppm for PCBs. These concentrations were determined to fall within the target excess carcinogenic risk range of  $10^{-4}$  to  $10^{-6}$ . No non-carcinogenic risks above a Hazard Index of 1 were found at OU2. The ROD for OU2 stated that natural attenuation would adequately address the groundwater contamination at OU1, and no further action was recommended. In accordance with the remedial action goal assumptions, the reasonably anticipated future land use assumed in the ROD was light industrial. The ROD noted that current city of Slidell zoning classification of light industrial land use is protective and that the city's zoning controls will ensure that land use remains protective in the event of a change to residential uses. However, the OU2 ROD went on to recommend certain actions by the local authority in connection with land use, including the following:

- Local planning officials and future property owners, users, or residents, should ensure that all excavation activities are conducted in a manner which would ensure that remaining contaminants in OU1 and OU2 are not brought to the surface, where they could pose a direct future contact threat.
- The city of Slidell is legally and physically able to enact zoning ordinances which would ensure that, in the event of a change in zoning that would allow residential development upon the site, such development will be fully protective.
- The city of Slidell should require that prior to securing necessary city building permits, that the prospective developer place a minimum of two feet of clean fill over the remaining contaminated areas of OU2, and that it will ensure that any soil excavated beneath that cover be removed off-site or be redeposited on-site and covered with clean fill.
- The city of Slidell Planning Director has been provided with a copy of the administrative record for the site to be filed in appropriate city land recordation files and zoning files to put future property users on notice of the above-described institutional controls recommended for the site.
- The shallow unconfined groundwater in OU1 should not be used for any purposes unless future testing by the property owner or developer deems it fit for use.

The ROD also required an annual review and inspection of the site for five years after the date of the ROD to ensure that it is protective of public health and the environment (EPA, 1997).



This annual inspection requirement was extended by the first Five-Year Review until the time of this second Five-Year Review.

### **Remedy Implementation**

The EPA and USACE signed an Interagency Agreement Grant in July 1995 to conduct the Remedial Action (RA) for OU1 at the Southern Shipbuilding Corporation Superfund Site. The USACE mobilized to the site in August, and the excavation and staging of contaminated sludge, sediment, and soil at OU1 began in September. The material that was to be incinerated was transported to the Bayou Bonfouca Superfund Site by barge. Transport of the contaminated materials began in October 1995, and the incineration began with a trial burn in December 1995. The sludge pits were used to create landfills to dispose of the incinerator ash and marginally contaminated soils. Sampling results after excavation indicated that sediments within the graving dock were still contaminated with tributyltin. The condition of the dock was such that further excavation could not be done. To prevent exposure of ecological receptors to the sediments, an 18 inch clay layer overlain by gravel was constructed in the graving dock.

The RI/FS for OU2 was conducted concurrent with the RA for OU1. Results showed that contamination at OU2 occurred across limited areas. EPA decided to address the contamination through limited removal actions. Beginning in April 1996, the Fraction A soils were excavated and sent to the Bayou Bonfouca Superfund Site for incineration. The incinerator ash was returned to the SSC site and disposed along with the contaminated materials from OU1. Fraction B soils were excavated, tested, and disposed off-site at the Woodside Landfill, a Resource Conservation and Reclamation Act (RCRA) Subtitle D non-hazardous municipal waste landfill in Walker, Louisiana. All excavated portions of the site were filled in with clean backfill and graded. All work associated with these actions were completed by June 1996, and all incineration ended in September 1996 (EPA, 1997 and E&E 1996a).

The RA completed at the Southern Shipbuilding Superfund Site included excavation of highly-contaminated soils for OU1 and OU2 and incineration at the nearby Bayou Bonfouca Superfund Site. The target depth established for remediation was 2 feet. Soils from OU1 containing concentrations of carcinogenic PAHs greater than 10 parts per million (ppm) benzo(a)pyrene (BAP) equivalents were incinerated at the Bayou Bonfouca Superfund Site. Graving dock sediments contaminated with tributyltin concentrations greater than 80 parts per billion (ppb) were also excavated and incinerated at the Bayou Bonfouca Superfund Site. The ash from the incinerator was returned to the site and disposed of on-site under a two foot clay cap. Soils from OU1 contaminated with carcinogenic PAHs between 1 and 10 ppm BAP equivalents were also excavated and disposed of under the clay cap.

Soils from OU2 were separated into two categories: Fraction A and Fraction B. Fraction A soils were contaminated with concentrations of carcinogenic PAHs greater than 10 ppm BAP equivalents and concentrations of other contaminants acceptable for incineration (arsenic < 30 ppm, lead < 500 ppm, and total PCBs < 10 ppm). Fraction B soils were all other contaminated soils from OU2. Fraction A soils were incinerated at the Bayou Bonfouca Superfund Site. Fraction B soils were contaminated with concentration of arsenic < 30 ppm, lead > 2,000 ppm, PAHs > 1 ppm BAP equivalents, and total PCBs > 10 ppm; however, as noted above, this material was not categorized as hazardous waste. Thus, Fraction B soils were excavated and disposed off-site at the Woodside Municipal Landfill, Walker, Louisiana, a RCRA Subtitle D facility. Asbestos contamination was also discovered in soil and debris at OU2. Asbestos-containing material was excavated and properly disposed off-site. All excavated areas were backfilled with clean fill and graded (EPA, 1997).

Removal action levels were based on site specific risk assessments. Also, a clay layer was established in the graving dock to limit exposure of ecological receptors to contaminated sediments that remained after excavation. Wastes left on-site in drums, containers, and tanks, as well as contaminated debris and trash were previously disposed of during the April 1995 emergency response removal action. The ROD for OU1 also suggested that existing fencing be maintained, that warning signs be posted, and that groundwater monitoring be conducted. The ROD for OU2 recommended that City of Slidell zoning restrictions be maintained and enforced for the site to maintain the protectiveness of the remedy (EPA, 1997 and EPA, 1995).

As a result of various remedial activities at the SSC site, approximately 35,000 cubic yards of contaminated soil, sludge, and sediment from OU1 were incinerated at the Bayou Bonfouca Superfund Site and disposed of under the SSC clay cap. About 53,000 cubic yards of marginally-contaminated soils from OU1 were also disposed of under the clay cap (EPA, 1997). From April to May 1996, through a removal action involving OU2 site areas, the EPA excavated at the SSC site and incinerated at the Bayou Bonfouca Superfund site approximately 1,072 cubic yards of highly-contaminated soil; and the residual ash was disposed of under the clay cap at the SSC site. About 5,000 cubic yards of non-hazardous contaminated soil and debris was disposed off-site at the Woodside Landfill, Walker, Louisiana. Approximately 300 cubic yards of soil and debris contaminated with ACM was excavated and disposed of off-site (EPA, 1997 and E&E, 1997). Also, approximately 2,000 cans, containers, and drums were removed from the site during the April 1995 removal action (EPA, 1997).

### **System Operation/Operation and Maintenance**

There are no EPA mandated O&M requirements for the site. Nonetheless, the EPA conducts annual site inspections to verify the condition and integrity of the clay cap, as well as to

identify any other adverse conditions affecting the site remedy. To-date, no repairs have been required or deficiencies noted. As noted above, the annual inspections were required by the ROD until 2002 (EPA, 1997). This requirement was revised by the first Five-Year Review to continue until 2005.

## **V. Progress Since the Last Five-Year Review**

Treated soil, ash, and low-level contaminated soils remain on the SSC site under a clay cap which covers approximately nine acres of the site. EPA considers the cap to be protective; nonetheless, since hazardous substances will remain on the SSC site, the EPA is required to conduct five-year reviews.

The first Five-Year Review report in September 2000 indicated that the selected remedies conducted at the SSC site were protective of human health and the environment. That conclusion was based on interviews with persons familiar with the remedial action, a site inspection made on August 22, 2000, a review of data, and currently applicable regulatory requirements. Until the time of final development of this report, no changes had occurred since the September 2000 Five-Year Review that warranted a reassessment of that finding. However, as noted below, on August 28-29, 2005, the greater New Orleans area, including Slidell, Louisiana, and extensive areas of the Mississippi Gulf Coast were struck by Hurricane Katrina, a category IV (Saffir/Simpson Scale) storm. As documented in the national press, Katrina caused wide scale, unprecedented and extensive devastation from high winds and massive flooding related to storm surge. Based on very informal initial reports, the SSC site may have suffered storm-related damage to the remedy components. As of the finalization of this report, an inspection of the SSC site had not occurred due to the inability to gain access to the site. An interagency response team attempted to enter the site on September 13, 2005, but were prevented by the security perimeter fence from entry and the landlord was not available. Without an inspection and evaluation of site conditions, no reliable conclusions can be drawn on the nature and extent of any damage incurred at the site by Katrina, or whether the site is protective of human health and the environment.

## **VI. Five-Year Review Process**

### **Administrative Components**

City of Slidell key officials were notified of the initiation of the five-year review on May 15, 2005. The Southern Shipbuilding Corporation Superfund Site Five-Year Review team was led by Michael Torres of EPA, Remedial Project Manager for the site, and the team included members of the Regional Technical Advisory staff with expertise in hydrology, biology, and risk assessment. Mr. Rich Johnson of the State also assisted in the review as representative for the

support agency. From March 1 to April 15, 2005, the SSC site review team established the review schedule whose components included:

- Community Involvement;
- Document Review;
- Data Review;
- Site Inspection;
- Local Interviews; and
- Five-Year Review Report Development and Review.

The schedule extended through September 2005.

### **Community Involvement**

Activities to involve the community in the five-year review were initiated with a meeting in early April 2005 between the RPM and the Community Involvement Coordinator for the Southern Shipbuilding Corporation Superfund Site. A notice was sent on May 3 - 4, 2005 to the *Slidell Sentry News*, a local newspaper, that a five-year review was to be conducted. A notice stating the same was sent to the SWAMP, the local Community Advisory Group; the City of Slidell Fire and Rescue Department; the Local Emergency Planning Committee; the Office of Councilman-District C; and the residents of properties adjacent to the Southern Shipbuilding Corporation Superfund Site. The letter invited the recipients to submit any comment to the EPA.

During the public availability sessions, a representative from the SWAMP and a neighborhood association representative expressed concern about the site's proposed reuse. They were interested in having the site returned to property that would provide green space and other community benefits, but they also appeared to support commercial and residential development of the site. None of the interviewees expressed any concerns over the protectiveness of the remedy.

### **Document Review**

This five-year review consisted of a review of relevant documents (Attachment 2) listed in the 1997 Record of Decision, EPA's site annual inspection reports, and the First Five-Year Review Report prepared by CH2M Hill in September 2000.

## Data Review

The target depth was two feet for excavation of contaminated soil and debris during the cleanup and remedial actions conducted as a removal action for OU2. Remedial Investigation activities such as soil, groundwater, and sediment sampling results and additional confirmatory sampling indicated that about 23 acres in OU2 exceeded the remedial action goals. These areas were excavated. Confirmation samples were collected when the initial excavation depth was less than two feet. The results of these samples were used to determine if additional excavation was necessary. Initially, no confirmation samples were collected if the excavation depth was two feet (E&E, 1996a). Subsurface soils samples were collected from the two foot interval in these excavations to document contaminant concentrations as a control at the foot interval. Confirmation samples were also collected for areas where asbestos-containing material removals were conducted (E&E, 1997). The results of all confirmation samples indicate that the remedial action goals set in the September 1997 ROD for OU2 were met at all locations (E&E, 1997 and E&E, 1996a). The sample results and discussions are reported in the Removal Support Report: Part 2 - Operable Unit 2, Southern Shipbuilding Corporation, Slidell, St. Tammany Parish, Louisiana (E&E, 1996a) and the Removal Support Report: Part 2, Addendum 1 - Operable Unit 2, Southern Shipbuilding Corporation, Slidell, St. Tammany Parish, Louisiana (E&E, 1997).

Operation and maintenance at the site does not generally require any sample collection or data analysis of any environmental media. However, in the wake of Hurricane Katrina, it is possible that additional sampling and data analysis will be required.

## Site Inspection

The second five-year review inspections by the EPA and State RPMs were conducted in April and July 2005. The RPMs found the structural integrity of the cap and fence to appear sound, intact, and secure. There was no evidence of construction or building of any kind on or around the cap. There was no evidence of trespassing or vandalism, and the RPMs observed a "for sale" sign posted on the fence along the site's entrance, during the April 2005 site inspection. The site owner indicated that his company was considering proposals on selling as well as redeveloping the site property, as viable business options. The site security perimeter fence was also intact on September 13, 2005, when an interagency response team attempted to enter the site for storm damage assessment.

At the July 2005 inspection, the EPA and State RPMs found the cap's perimeter to be vegetated with grass, and weeds covered some of the interior portions. Furthermore, along parts of the southeastern portion and the northern portion along the bayou of the cap, there was evidence of minor erosion due to rain runoff. The site appeared to have sound structural

integrity, even after a hurricane passed nearby the site a few weeks prior to this inspection. This minor erosion did not appear to compromise the integrity of the cap and showed no evidence of exposed landfill materials that have been left in place. There was no evidence of subsidence or dessication of the cap. Moreover, there was no evidence of deep ruts, holes, or cracks in the cap. There was no evidence of areas where water pools or has pooled in any low-lying areas, and no identified slope instability. The RPMs and site owner discussed the minor erosion on the southeastern and northern corners, and the site owner agreed to repair or maintain these details. No O&M records were provided. Nonetheless, as of July 2005, the cap remained protective of human health and the environment, based on site conditions and meteorological activity at that time.

As of July 2005, the fence around the perimeter of the site appeared to be intact with locks on all gated entrances. The USACE has access and keys to the gated and locked site. Maintenance of the site includes routine fence inspections, repairs to the fence as necessary, and grass control. There were no signs or evidence of trespassing or loitering, and there was no evidence of fence repair due to vandalism. However, as noted above, the area was hit on August 28-29, 2005 by the Category IV Hurricane Katrina storm with extremely high winds and an unprecedented storm surge. As of the time of finalization of this report, more than two weeks after the storm, SSC on-site post hurricane conditions were unknown. An interagency response team reported on September 13, 2005 that the SSC site perimeter was still secure, as they had been unable to gain access. However, a report from the site owner indicated that a 12 foot storm surge and extremely high winds had hit the area of the site and that his employees had reported that some site buildings had been destroyed. This was at least partially verified by the inspectors who indicated that they could see damaged buildings on the site from the gate.

## **Interviews**

Interviews were conducted with Mr. Steven Siegler, a businessman and the current site property owner; officials of the City of Slidell, Mayor Ben Morris, former City of Slidell Mayor Sam Caruso, Planning Director Martin Bruno, Fire Chief Larry Hess, City Engineer Stan Polivick, Chief of Staff Reinhard Dearing; Councilman-District C, London Cusimano; LDEQ official Rich Johnson; and several community members and residents living near the site. Copies of key interview response forms are attached to this report (Attachment 3) and are available, if needed, upon request from EPA-R6 Community Involvement Coordinator for the SSC site, Ms. Janetta Coats ([coats.janetta@epa.gov](mailto:coats.janetta@epa.gov)).

All parties interviewed responded favorably for how effectively the site was addressed, pertaining to the remedial action activities that cleaned up the former site operations. A site neighbor living next to the bayou and directly adjacent to the site complained about a

dilapidating barge tied to a bayou dock at the site. A community member complained that the City of Slidell was rapidly losing green space. There were no concerns or questions pertaining to the protectiveness of the remedy. Overwhelmingly, the major topic at these interviews appeared to concern the future land use at the site. All parties interviewed seemed to have a favorable opinion about redeveloping the site for commercial and residential reuse purposes. None of the interviewees were able to identify any concerns regarding the site and there had not been any emergency responses at the site since the end of the remedial action.

### **Technical Assessment**

#### Question A: Is the remedy functioning as intended by the decision documents?

The review of documents, Applicable or Relevant and Appropriate Requirements (ARARs), risk assumptions, and the results of the site inspection indicate that the remedy is functioning as intended by the ROD. The digging, hauling, and incineration and off-site disposal of some soils, and capping of ash and low-impact contaminated soils has achieved the remedial objectives to minimize the migration of contaminants to groundwater and surface water and prevent direct contact with, or ingestion of, contaminants in soil and sediments. While institutional controls have not been implemented, these have not affected the protectiveness for the site.

Voluntary operation and maintenance of the cap by the site owner has, on the whole, been effective. A few small areas showed evidence of minor erosion due to run-off. The erosion did not penetrate beyond the soil layer, and so did not affect protectiveness. The site owner is arranging to maintain or repair the minor eroded areas of the cap and will include the task of inspection and repair in future operation and maintenance routines.

The full impact of Hurricane Katrina on the site must be assessed, as noted below and elsewhere herein. Based upon preliminary and sketchy information, the SSC site could have sustained some significant damage to its remedial components. However, because of exigencies associated with the national disaster response to the unprecedented damage caused by this storm, that information is not currently available at the time of finalization of this report.

#### Question B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy selection still valid?

There is the possibility that Hurricane Katrina may have impacted some of these factors, but this cannot be known until further information is gathered about the impact of the storm on the SSC site. See the discussion below and elsewhere in this report.

### Changes in Standards and To Be Considereds

Hazardous waste incineration is no longer occurring as part of the site remedy, and the 40 CFR Part 264 Subpart O regulations no longer apply to the site. There are no discharges from the site into Bayou Bonfouca, and the regulations under 40 CFR Parts 129 and 131 no longer apply to the site remedy. No archeological or historical structures were identified at the site, and the National Historic Preservation Act and the Archaeological and Historic Preservation Act no longer apply to the remedy of the site.

Since the ROD was signed, there have been no changes to the regulations under 40 CFR Part 257.3-1 through 3-4. There have been no changes to Executive Order No. 11988 (floodplains) or Executive Order No. 11990 (wetlands). In addition, there have been no changes to the Fish and Wildlife Act or the Endangered Species Act.

The EPA has promulgated changes in the Land Disposal Requirements, pertaining to the classification of contaminated soil in 40 CFR 268.49, (63 FR 28602-28622). The remedy satisfies these ARAR specifications.

### Changes in Exposure Pathways, Toxicity, and Other Contaminant Characteristics

There have been no changes in the toxicity factors for the contaminants of concern that were used in the baseline risk assessment. These assumptions are considered to be conservative and reasonable in evaluating risk and developing risk-based cleanup levels. No change to these assumptions, or the cleanup levels developed from them is warranted. There has been no change to the standardized risk assessment methodology that could affect the protectiveness of the remedy. The remedy is progressing as expected and the five-year reviews and annual inspections find that all remedial objectives have been effectively met. The Agency must assess the impact of Hurricane Katrina on potential exposure pathways and contaminant release before rational conclusions can be drawn about its effects. See the discussion below and elsewhere herein.

### Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

No ecological targets were identified during the baseline risk assessment and none were identified during the five-year reviews, and therefore monitoring of ecological target is not necessary. However, the devastating impact of Hurricane Katrina on August 28-29, 2005, may well have affected the protectiveness of the remedy at the site. A discussion is set forth below



under "Issues" and elsewhere in this report. There is no other information that calls into question the protectiveness of the remedy.

The site owner is proposing site redevelopment plans that would require property zoning changes from current light industrial to commercial and residential status. Furthermore, the City of Slidell officials have expressed some interest in similar zoning changes. If the proposed reuse plan is implemented, the City of Slidell would have to follow the recommendations that were made by the EPA in the OU2 ROD for the current remedy to remain protective of human health or the environment. The City has indicated an intent to do so. Certainly, the City's record in the maintenance and defense of its zoning requirements in connection with this site would indicate an ability and a willingness to enforce its zoning ordinances. In the face of a federal lawsuit alleging constitutional violations by the site owner, the City aggressively litigated the matter in defense of its zoning process. *Equity Development Systems, Ltd. v. The City of Slidell, Louisiana*, C.A. No. 00-2410 (E.D.La.). Further evaluation of the site and any necessary administrative and response actions shall occur if the current land use is changed.

#### Technical Assessment Summary

According to the data reviewed, the site inspections, and the interviews, the remedy is functioning as intended by the September 1997 ROD. ARARs for soil contamination cited in the ROD have been met. There has been no changes in the toxicity factors for the contaminants of concern that were used in the baseline risk assessment, and there have been no change to the standardized risk assessment methodology that could affect the protectiveness of the remedy. However, the potential effects of Hurricane Katrina call into question the protectiveness of the remedy. See the discussion below and elsewhere in this report.

#### **VIII. Issues**

As stated in the September 1997 OU2 Record of Decision, the site remedy is generally protective for light industrial use. At present, the site is not used for any activity except routine and minimal maintenance of the fence and grounds. There was no evidence of preparations for construction and development of facilities necessary for reuse. According to Mr. Steven Siegler, Managing Director of Equity Development Systems Ltd., there are ongoing discussions with the City of Slidell to work towards a reuse resolution. Mr. Siegler also indicated to the EPA, LDEQ, and City of Slidell officials that his company is moving forward with proposed plans to redevelop all of the Southern Shipbuilding Corporation site for possible residential and commercial purposes. The City of Slidell, some of its community members, and the site owner are interested in returning the site into the commercial and residential stream of commerce rather

than for light industrial reuse. Further evaluation of the site and the necessary administrative and remedial actions shall occur if the current land use is changed.

As of the site inspection accomplished in July 2005 and other site documentation, the remedial action at the site as originally set forth in the Record of Decision had been implemented as planned and it appeared to continue to be protective of human health and the environment. However, on August 28-29, 2005, the Slidell, Louisiana area, as well as the Greater New Orleans area and Mississippi Gulf Coast were stricken by the Category IV (Saffir/Simpson Scale) Hurricane Katrina. This storm caused unprecedented catastrophic destruction due to high winds and an unparalleled storm surge. In the Slidell area, the Bayou Bonfouca which empties into the northeastern part of Lake Pontchartrain, was informally reported to have incurred a storm surge of as much as 12 feet well upstream. Because of the national disaster response of unprecedented proportions in this area of Louisiana, as of the finalization of this report, conditions and damage at the site other than site security, were unknown. An interagency response team attempted to enter the facility on September 13, 2005, however, it could not gain entry due to the absence of the landlord and the effectiveness of site perimeter security. An inspection and additional studies as necessary will be conducted, consistent with the exigencies of the national disaster response. If necessary, appropriate response action will be taken or required to address site conditions.

#### **IX. Recommendations and Follow-up Actions**

- A site inspection, along with any required analytical sampling, evaluation, and analysis, will be undertaken as soon as possible, consistent with the exigencies of the national disaster response to Hurricane Katrina;
- Take and/or require appropriate response action to address site damage incurred as a result of Hurricane Katrina. In the event that no damage has been incurred to the on-site clay cap, then work closely with the site owner to ensure and oversee the repair of some minor erosional features and maintenance of the on-site clay cap, which could affect the protectiveness of the next Five-Year Review;
- Work closely with the site owner, LDEQ, and the City of Slidell when tangible reuse proposals and redevelopment plans are submitted, to ensure the site remains protective of human health and the environment;
- In the event of an approved proposal for redevelopment of the site through the "Ready for Reuse (RfR)" process or otherwise, that involves the requirement for institutional controls or other remedial measures at the site, an Amended ROD

must also be initiated and approved by the EPA, since the 1997 ROD called for no further action;

- Require the developer of the site to ensure implementation of any necessary institutional controls as needed to change the use status of the site, to ensure the protection of remedial components, or for other reasons;
- Oversee the enforcement of any newly required institutional controls at the SSC site; and
- Due to frequent and extreme meteorological events in the area, continue annual inspection of the site until the September 2010 Five-Year Review or until the site is approved by EPA as RfR and redeveloped according to RfR approved plans.

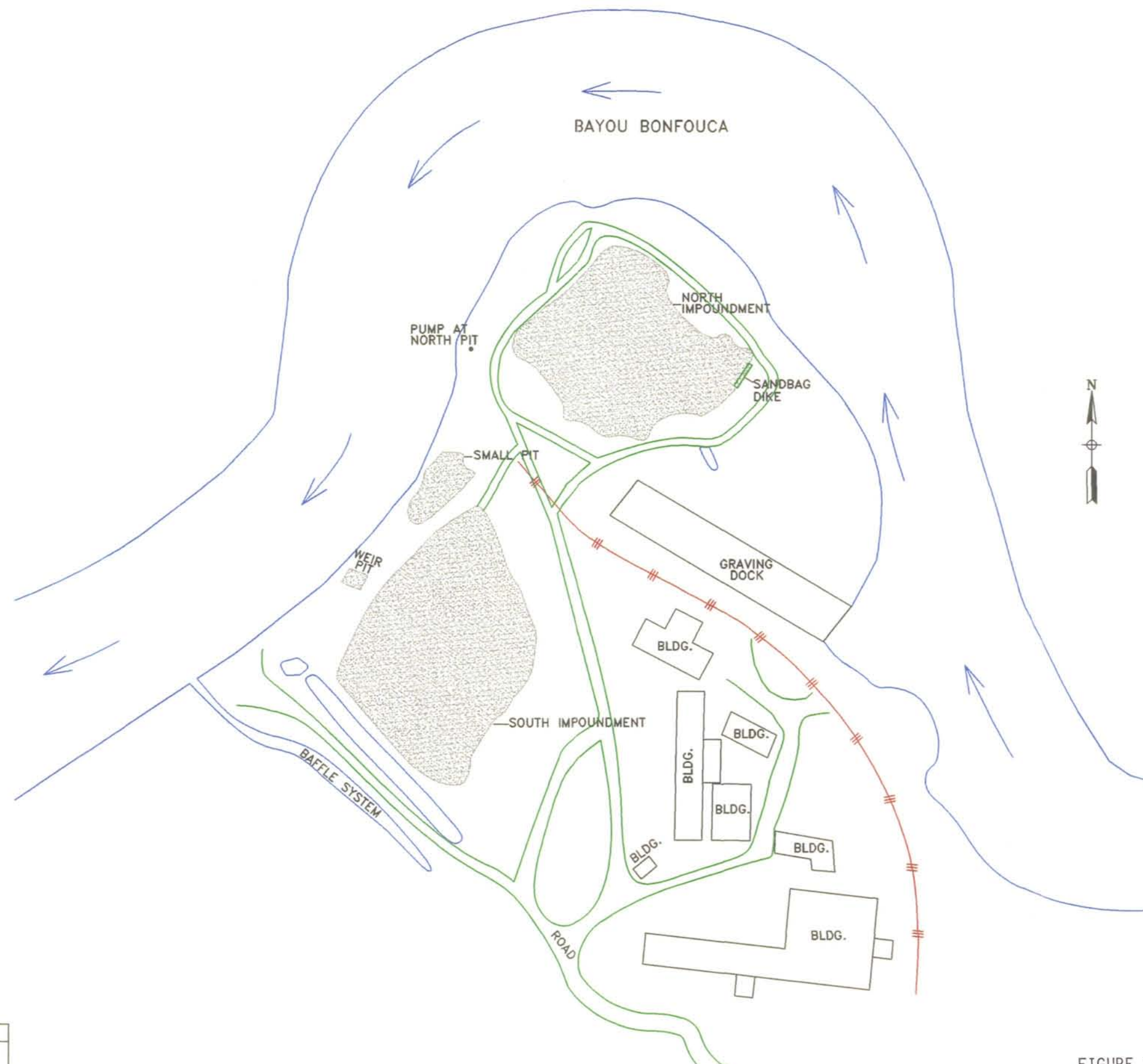
#### **X. Protectiveness Statement**

The remedy conducted at the Southern Shipbuilding Corporation Superfund Site cannot be found to be protective of human health and the environment at this time. As of July 2005, the clay cap that was installed over an area where incinerator ash and contaminated soils were placed continued to maintain its structural integrity. The site was fenced and locked on the landward side and a post hurricane reconnaissance indicated the site was still secure, but could not be accessed for inspection. Although access is available from the Bayou Bonfouca waterway, it did not appear as of July 2005 that any trespassing had occurred on-site. The clay layer that was placed near the edge of the bayou had not sustained any major erosional damage as of July 2005. Furthermore, based on the site interviews, the site inspections, and the data review, it appeared in July 2005 that the remedy was functioning and protective as intended in the ROD. No new laws or regulations have been promulgated or enacted that would call into question the effectiveness of the remedy at the Southern Shipbuilding Corporation Superfund Site. However, because of the tremendous damage inflicted in the site vicinity and elsewhere in the greater New Orleans area by Hurricane Katrina and informal reports of damage as noted herein, combined with the uncertainty about actual site conditions, the remedy cannot be found to be protective at this time. The EPA will have the site inspected and take appropriate followup action, as soon as possible, consistent with the exigencies of the disaster response and circumstances in the area of the site.

**XI. Next Review**

The ninth annual inspection of the site should be conducted by September 2006.

The next five-year review of the site should be conducted on or before September 30, 2010. The subsequent review should include a site inspection and community interviews, a review of the land use or reuse progress at the site, and a review of any site-related institutional controls, to ensure that the remedy remains protective, and a determination whether annual inspections should continue when future reuse is realized.



0' 50'



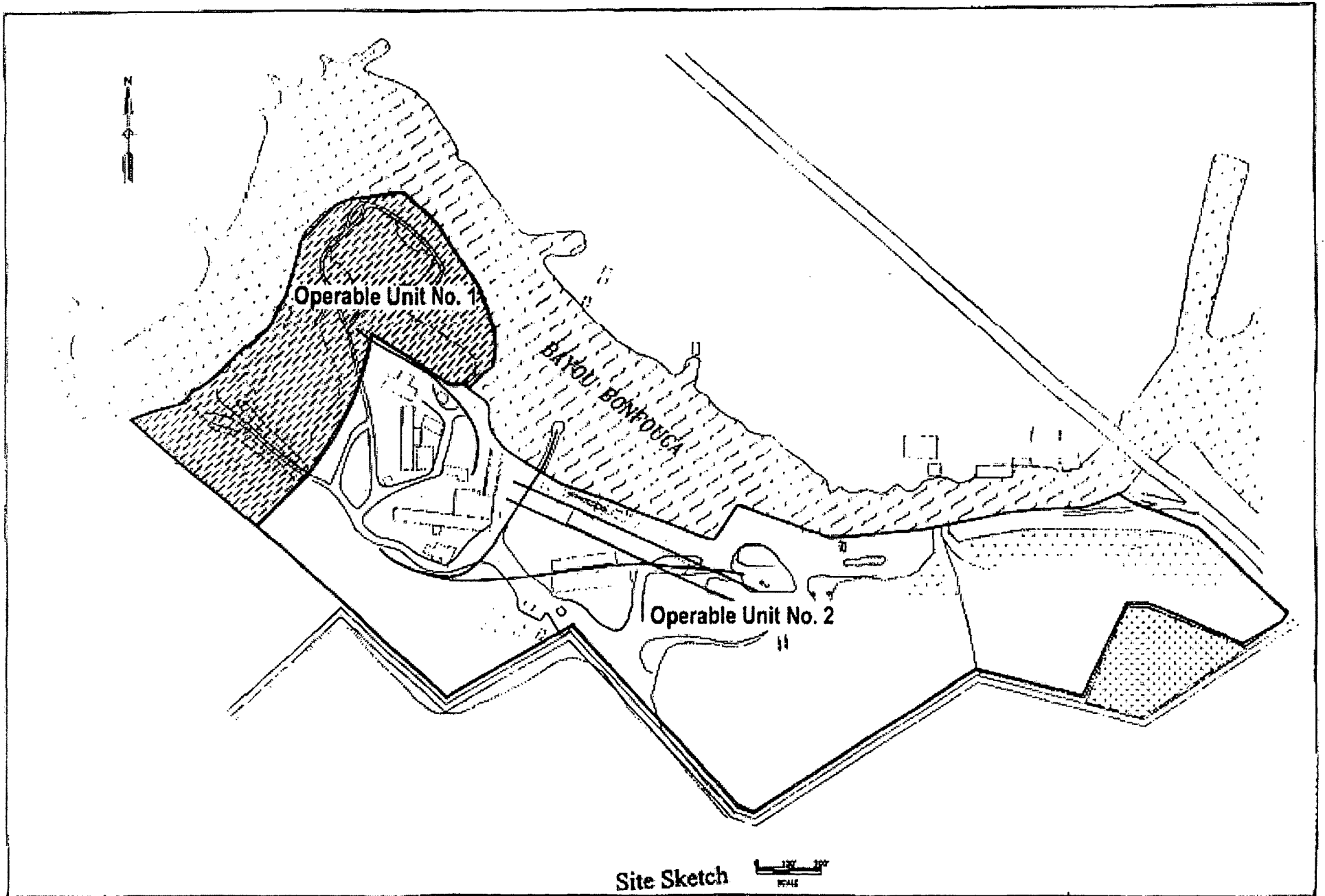
LEGEND	
	Surface Impoundments
	Railroads

FIGURE 1  
Page 22 of 27



## ATTACHMENT 1

### ARARs Review

Applicable or Relevant and Appropriate Requirements (ARARs) for this site were identified in the July 1995 ROD for OU1. The September 1997 ROD for OU2 contained no identification of ARARs pertinent to a final remedy, since this was a “no-action” ROD. This Second Five-Year Review Report includes identification of and evaluation of changes in these ARARs to determine whether such changes may affect protectiveness of the selected remedy.

The ROD for OU1 for the site identified the following ARARs as having an impact on the proposed remedy:

- RCRA Land Disposal Restriction (LDRs), as regulated under 40 CFR Part 268;
- Fish and Wildlife Coordination Act, 16 U.S.C. §1661 et seq., which is applicable during levee stabilization activities;
- The operational standards and monitoring requirements for hazardous waste incinerators, as regulated under 40 CFR Part 264 Subpart O;
- Requirements to evaluate and avoid adverse impacts to wetlands, as regulated under the Executive Order on the Protection of Wetlands, Executive Order No. 11990;
- Requirements to evaluate the potential impacts to floodplains as regulated under the Executive Order on Floodplain Management, Executive Order No. 11988;
- Endangered Species Act, 16 U.S.C. §1531 et seq., which applies to the remedy since several endangered species live in the vicinity of the site;
- National Historic Preservation Act, 16 U.S.C. §470 et seq., and the Archaeological and Historic Preservation Act, 16 U.S.C. §469 et seq., which applies to the preservation of any historical or archaeological structures found at the site;
- Criteria and standards for the National Pollutant Discharge Elimination System and Toxic Pollutant Effluent Standards, as regulated under 40 CFR Part 129, and Water Quality Standards, as regulated under 40 CFR Part 131;

**Southern Shipbuilding Corporation Superfund Site  
Second Five-Year Review Report  
September 2005**

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- RCRA Criteria for Classification of Solid Waste Disposal Facilities Practices, as regulated under 40 CFR Part 257.3-1 through 3-4 (EPA, 1995); and
- No state ARARs were identified in the ROD (EPA, 1995).



## ATTACHMENT 2

### List of Principal Documents Reviewed

Decision Summary, Southern Shipbuilding Corporation Superfund Site, Record of Decision, July 1995

Southern Shipbuilding Corporation Site, Slidell, Louisiana, Engineering Evaluation/Cost Analysis, March 1995, Volume 1

Southern Shipbuilding Corporation Site, Slidell, Louisiana, Engineering Evaluation/Cost Analysis, March 1995, Volume 2

Southern Shipbuilding Corporation, RI/FS Draft Work Plan, August 29, 1995

Final Report, Southern Shipbuilding Field Investigation and Ecological Risk Assessment, Slidell, Louisiana, March 1996

Removal Support (EPA) Report, Part 2 - Operable Unit 2, Southern Shipbuilding Corporation, Slidell, St. Tammany Parish, Louisiana, December 3, 1996

Removal Assessment Report For Southern Shipbuilding Corporation Site, Slidell, St. Tammany Parish, Louisiana, December 16, 1996

Southern Shipbuilding Corporation Site, Slidell, Louisiana, Remedial Investigation Operable Unit 2, August 1996, Volume 1

Southern Shipbuilding Corporation Site, Slidell, Louisiana, Remedial Investigation Operable Unit 2, August 1996, Volume 2

Final Feasibility Study Report Operable Unit 2, Southern Shipbuilding Corporation Site, Slidell, St. Tammany Parish, Louisiana, September 1996

Aerial Photographic Analysis, Bayou Bonfouca and Southern Shipbuilding Corporation Sites, Slidell, Louisiana, February 1998

First Five-Year Review Report for Southern Shipbuilding Corporation, Slidell, St. Tammany Parish, Louisiana, September 2000

### **ATTACHMENT 3**

#### **Interview Record Forms**

- 1.0 Slidell, LA citizen Carl Helwig Interview Form
- 2.0 Slidell, LA citizen Cookie Brown Interview Form
- 3.0 Slidell, LA citizen Marie Ricca Interview Form
- 4.0 Slidell, LA citizen Mary Tingle Interview Form
- 5.0 The City of Slidell Officials Interview Form
- 6.0 The City of Slidell Fire Chief Larry Hess Interview Form
- 7.0 LDEQ Official Rich Johnson Interview Form
- 8.0 SSC Site owner Steven Siegler Interview Form

<b>Five-Year Review Interview Record</b> Southern Shipbuilding Slidell, Louisiana		<b>Interviewee:</b> Carl Helwig/SWAMP Slidell Working Against Major Pollution <b>Affiliation:</b> TAG Recipient <b>Phone:</b> (985)641-2599 <b>Fax:</b>			
<b>Site Name</b>		<b>EPA ID No.</b>		<b>Date of Interview</b>	<b>Interview Method</b>
Southern Shipbuilding Corporation Superfund Site				May 18, 2005	Individual Interview
<b>Interview Contacts</b>	<b>Organization</b>	<b>Phone</b>	<b>Email</b>	<b>Address</b>	
Please return completed interview form to Janetta Coats 214-665-7308 or the return address or email listed below.					
Michael Torres	EPA Region 6	214-665- 2108	torres.michael @epa.gov	1445 Ross Ave, Suite 1200 Dallas, Texas 75202	
Janetta Coats	EPA Region 6	214-665- 7308	coats.janetta @epa.gov	1445 Ross Ave, Suite 1200 Dallas, Texas 75202	
<b>Purpose of the Five-Year Review</b>					
<p>The purpose of the five-year review is to evaluate the implementation and performance of the remedy, to confirm that human health and the environment continue to be protected by the actions performed. The second five-year review for the Southern Shipbuilding Corporation Superfund site focuses on the addressing contamination within OU1 and consolidation and capping of contaminated soils and ash at the site for excavation and incineration.</p> <p>Future land use at the site is not yet decided, and future land use may potentially affect the remedy. The remedy was based on future land use of light industrial in accordance with City of Slidell zoning requirements, without intrusive activities within the area of the cap.</p>					
<b>Interview Questions</b>					

1. What is your overall impression of the project?

**Response:** A good job done in cleaning up the site.

2. What effects have site operations had on the surrounding community?

**Response:** Now that the site has been cleaned up, it does not have the stigma of being a hazardous superfund site.

3. Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details.

**Response:** I am not aware of anything being done with the property. The community would like to see the property re-developed.

4. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, or emergency responses from local authorities? If so, please give details.

**Response:** I am not aware of any events, incidents or activities at the site.

5. Do you feel well informed about the site's activities and progress?

**Response:** Yes, I feel well informed about the site's activities and progress. I was also the TAG recipient and attend all the community meetings regarding the site activities and progress.

6. Do you have any comments, suggestions, or recommendations regarding the site's management or operations? authorities? If so, please give details..

**Response:** In regards to the site's management/operations, I would like to see something done with the site. The site continues to be an eyesore to the public and the community.

7. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

**Response:** It would be nice to see the property developed into some type of waterfront property. The development of the waterfront property could be attractive and developed similar to the river boat tourist area in New Orleans, Louisiana.

<b>Five-Year Review Interview Record</b> Southern Shipbuilding Slidell, Louisiana		<b>Interviewee:</b> Cookie Brown <b>Affiliation:</b> Resident <b>Phone:</b> (985) 643-3553 <b>Fax:</b>			
<b>Site Name</b>		<b>EPA ID No.</b>		<b>Date of Interview</b>	<b>Interview Method</b>
Southern Shipbuilding Corporation Superfund Site				July 7, 2005	Verbal In Person
<b>Interview Contacts</b>	<b>Organization</b>	<b>Phone</b>	<b>Email</b>	<b>Address</b>	
Please return completed interview form to Janetta Coats 214-665-7308 or the return address or email listed below.					
Michael Torres	EPA Region 6	214-665-2108	torres.michael@epa.gov	1445 Ross Ave, Suite 1200 Dallas, Texas 75202	
Janetta Coats	EPA Region 6	214-665-7308	coats.janetta@epa.gov	1445 Ross Ave, Suite 1200 Dallas, Texas 75202	
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<b>Interview Questions</b>					
1. What is your overall impression of the project?					
<b>Response:</b> Overall less commercial traffic					

2. What effects have site operations had on the surrounding community?

**Response:** I have observed many new single family homes in the community.

3. Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details.

**Response:** The U.S. Coast Guard and U.S. Rep Daniel Vitter were informed of a Barge being housed at the site. By housing equipment, barges, boats etc., it provides a haven for rodents, pollution, dumping and the public to tie up their voyages.

I have provided a few pictures.

4. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, or emergency responses from local authorities? If so, please give details.

**Response:** No, I am not aware of any of the above activities.

5. Do yo feel well informed about the site's activities and progress?

**Response:** No, I do not feel well informed about the site activities and progress. The residents of Bywater Drive will be the first to feel the effects of any future development to the site.

6. Do you have any comments, suggestions, or recommendations regarding the site's management or operations? authorities? If so, please give details..

**Response:** I would like for you to continue to inform the residents of any changes or meetings concerning the superfund site. It would be great if a larger buffer zone can be provided between the shipyard and the Bywater residents. Would like to see something done on the property.

7. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

**Response:** It would be nice to see condos or residential development on the property.

<b>Five-Year Review Interview Record</b> Southern Shipbuilding Slidell, Louisiana		<b>Interviewee:</b> Marie Ricca <b>Affiliation:</b> Resident <b>Phone:</b> (985) 643-2596 <b>Fax:</b>			
<b>Site Name</b>		<b>EPA ID No.</b>		<b>Date of Interview</b>	<b>Interview Method</b>
Southern Shipbuilding Corporation Superfund Site				July 17, 2005	Submitted Via Mail
<b>Interview Contacts</b>	<b>Organization</b>	<b>Phone</b>	<b>Email</b>	<b>Address</b>	
Please return completed interview form to Janetta Coats 214-665-7308 or the return address or email listed below.					
Michael Torres	EPA Region 6	214-665-2108	torres.michael@epa.gov	1445 Ross Ave, Suite 1200 Dallas, Texas 75202	
Janetta Coats	EPA Region 6	214-665-7308	coats.janetta@epa.gov	1445 Ross Ave, Suite 1200 Dallas, Texas 75202	
<b>Purpose of the Five-Year Review</b>					
<p>The purpose of the five-year review is to evaluate the implementation and performance of the remedy, to confirm that human health and the environment continue to be protected by the actions performed. The second five-year review for the Southern Shipbuilding Corporation Superfund site focuses on the addressing contamination within OU1 and consolidation and capping of contaminated soils and ash at the site for excavation and incineration.</p> <p>Future land use at the site is not yet decided, and future land use may potentially affect the remedy. The remedy was based on future land use of light industrial in accordance with City of Slidell zoning requirements, without intrusive activities within the area of the cap.</p>					
<b>Interview Questions</b>					



1. What is your overall impression of the project?

**Response:** Not adversely affecting surrounding area. I have not noticed any impact.

2. What effects have site operations had on the surrounding community?

**Response:** same as above

3. Are you aware of any community concerns regarding the site or its operation and administration?  
If so, please give details.

**Response:** The site need to be remediated or offer tours of the "unbelievable" site as it was.

4. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, or emergency responses from local authorities? If so, please give details.

**Response:** No

5. Do you feel well informed about the site's activities and progress?

**Response:** I feel Informed, but not well-informed

6. Do you have any comments, suggestions, or recommendations regarding the site's management or operations? authorities? If so, please give details.

**Response:** I would like to see the land used for high-end-low density housing or a Bed and Breakfast type accommodations. It would be nice to also have canoes, paddle boat rentals, nice restaurants with outdoor café, music venue (House of Blues) performing arts theatre, sculpture garden, and a water park.

7. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

**Response:** none

<b>Five-Year Review Interview Record</b> Southern Shipbuilding Slidell, Louisiana		<b>Interviewee:</b> Mary Tingle/President <b>Affiliation:</b> Palm Lake Homeowners <b>Phone:</b> (985) 641-6480 <b>Fax:</b>			
<b>Site Name</b>		<b>EPA ID No.</b>		<b>Date of Interview</b>	<b>Interview Method</b>
Southern Shipbuilding Corporation Superfund Site				July 7, 2005	Verbal In Person
<b>Interview Contacts</b>	<b>Organization</b>	<b>Phone</b>	<b>Email</b>	<b>Address</b>	
Please return completed interview form to Janetta Coats 214-665-7308 or the return address or email listed below.					
Michael Torres	EPA Region 6	214-665-2108	torres.michael@epa.gov	1445 Ross Ave, Suite 1200 Dallas, Texas 75202	
Janetta Coats	EPA Region 6	214-665-7308	coats.janetta@epa.gov	1445 Ross Ave, Suite 1200 Dallas, Texas 75202	
<b>Purpose of the Five-Year Review</b>					
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<b>Interview Questions</b>					

1. What is your overall impression of the project?

**Response:** I am satisfied with the cleanup of the site.

2. What effects have site operations had on the surrounding community?

**Response:** The site has always been an eye sore for the community.

3. Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details.

**Response:** I am not interested in commercial business on the property. It has been a community perception how the property was purchased by Mr. Siegler.

4. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, or emergency responses from local authorities? If so, please give details.

**Response:** No

5. Do you feel well informed about the site's activities and progress?

**Response:** No

6. Do you have any comments, suggestions, or recommendations regarding the site's management or operations? authorities? If so, please give details..

**Response:** I would like to see something done to the property. The property is just there gated.

7. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

**Response:** It would be nice to see the development of condos or a residential development on the property.



<b>Five-Year Review Interview Record</b> Southern Shipbuilding Slidell, Louisiana		<b>Interviewee:</b> Mayor Ben Morris City Engineer/Stan Polivick City Planner/Martin Bruno Chief of Staff/Reinhard Dearing Director Public Operations/Michael Noto Former Mayor Sam Caruso <b>Affiliation:</b> City of Slidell Louisiana Officials  <b>Phone:</b> (985 ) 646-4333 <b>Fax:</b>			
<b>Site Name</b>		<b>EPA ID No.</b>		<b>Date of Interview</b>	<b>Interview Method</b>
Southern Shipbuilding Corporation Superfund Site				May 18, 2005	Group Meeting
<b>Interview Contacts</b>	<b>Organization</b>	<b>Phone</b>	<b>Email</b>	<b>Address</b>	
Please return completed interview form to Janetta Coats 214-665-7308 or the return address or email listed below.					
Michael Torres	EPA Region 6	214-665-2108	torres.michael@epa.gov	1445 Ross Ave, Suite 1200 Dallas, Texas 75202	
Janetta Coats	EPA Region 6	214-665-7308	coats.janetta@epa.gov	1445 Ross Ave, Suite 1200 Dallas, Texas 75202	
<b>Purpose of the Five-Year Review</b>					
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**Interview Questions**

1. What is your overall impression of the project?

**Response:** The work was conducted in an expeditious manner. The cleanup was successful in quickly protecting area residents from the threats posed by the site. We are pleased with the remedy and EPA response. We do not have any complaints

2. Have there been routine communications or activities (site visits, inspections, reporting activities, etc.,) Conducted by your office regarding the site? If so, please give purpose and results.

**Response:** EPA has communicated regularly with area residents through community involvement events, periodically distributed fact sheets, and public notices. There has not been a reason for the city to visit the site, nor has the public made any comments or concerns to City officials about previous site activities.

3. Are you aware of any ongoing community concerns?

**Response:** A small number of community residence voiced interest of a Bird Sanctuary or green space park.

4. Have there been any complaints, violations, or other incidents related to the site requiring a response by your office? If so, please give details of the events and results of the responses.

**Response:** None. There has been no response for the city since the remedial action response was completed.

5. Do you feel informed about the site's activities and progress?

**Response:** Yes, we do not have any complaints.

6. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

**Response:** The city does not have a reason to visit the site. The site is gated and locked. We are not aware of any operations at the site. The city officials supports the reuse or redevelopment of the site. We do not want another Superfund site, so we would support any re-zoning to reflect any potential commercial and residential use of the property.. The City of Slidell is more interested in returning the site to commercial or residential purposes, rather than for industrial use. The city officials would like to jointly work with the property owner, regarding the proposed re-development of the site. We are willing to work with the property owner on any re-development plans or proposals. The city is also aware of the site owner's continuous efforts to clean up the trash and other debris at the site.

7. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, or emergency responses from local authorities? If so, please give details..

**Response:** None

The site is gated and locked.

8. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

**Response:** No. The city will rely upon EPA/DEQ to conduct annual reviews. We have concerns on whether the vault/capped area would be zoned as residential. (**RPM response:** It would be possible with the proper implementation of Institutional Controls and additional remedy of 2ft. of soil/concrete atop that area..)



9. The property owner is proposing re-development plans. Has this been discussed?

**Response:** Yes. We will work with the property owner on re-development plans for the site. If Institutional Controls (IC) are required, the city will work with the property owner to implement.

10. Who will enforce ICs?

**Response:** The City expects the EPA or the State to enforce the ICs, if possible. (The City was informed by the RPM that it would be more likely for the City to enforce for better management and control of the redevelopment area, and so that any improvement to this area would also fall within the confines of their 10-, 15-, 20- year Master Plan). Perhaps the City could enforce these institutional controls through the Public Utility District requirements. We would like to get some direction from the EPA on this issue, when time comes to implement and enforce the proposed institutional controls.

11. Do you have any questions or concerns about the enforcement of ICs?

**Response:** The city would like for EPA to provide in writing, guidance to enforce the ICs, once they are identified and defined.

<b>Five-Year Review Interview Record</b> Southern Shipbuilding Slidell, Louisiana		<b>Interviewee:</b> Fire Chief Larry Hess <b>Affiliation:</b> Fire Dept. <b>Phone:</b> (985) 649-3556 <b>Fax:</b>			
<b>Site Name</b>		<b>EPA ID No.</b>		<b>Date of Interview</b>	<b>Interview Method</b>
Southern Shipbuilding Corporation Superfund Site				July 6, 2005	Individual Interview
<b>Interview Contacts</b>	<b>Organization</b>	<b>Phone</b>	<b>Email</b>	<b>Address</b>	
Please return completed interview form to Janetta Coats 214-665-7308 or the return address or email listed below.					
Michael Torres	EPA Region 6	214-665-2108	torres.michael@epa.gov	1445 Ross Ave, Suite 1200 Dallas, Texas 75202	
Janetta Coats	EPA Region 6	214-665-7308	coats.janetta@epa.gov	1445 Ross Ave, Suite 1200 Dallas, Texas 75202	
<b>Purpose of the Five-Year Review</b>					
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<b>Interview Questions</b>					

1. What is your overall impression of the project?

**Response:** The zoning should be changed to fit the needs of the community and the city. I am concerned about the possibility of industrial businesses being developed on the property. My preference would be to see light manufacturer, commercial and residential development, in that order of importance.

2. Have there been routine communications or activities (site visits, inspections, reporting activities, etc.,) Conducted by your office regarding the site? If so, please give purpose and results.

**Response:** Yes, I have been a residence for 20 years. I am also familiar with the Bayou Bonfouca Superfund Site.

3. Have there been any complaints, violations, or other incidents related to the site requiring a response by your office? If so, please give details of the events and results of the responses.

**Response:** I have not received any complaints regarding the site; however, I have received complaints regarding other issues. None for local surrounding residents. The complaints have been unrelated to the Southern Shipbuilding Superfund Site.

4. Do you feel informed about the site's activities and progress?

**Response:** Yes

5. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

**Response:** The exchange of information regarding the site has been good. The Mayor has been sharing information. There is no need to add another official to your contact list.

6. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, or emergency responses from local authorities? If so, please give details..

**Response:** Not aware of any issues relating to the site.

7. Do you feel well informed about the site's activities and progress?

**Response:** Yes. I would like to participate in public hearings etc.,

8. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

**Response:** I would like to see commercial development. Concerns of the property being developed into residential community. Exposure issues of perception instead of science. Some concerns of EJ. Industrial Facility in neighborhood. Fly Ash remain on privately owned property.

<b>Five-Year Review Interview Record</b> Southern Shipbuilding Slidell, Louisiana		<b>Interviewee:</b> Rich Johnson <b>Affiliation:</b> LDEQ <b>Phone:</b> (225 ) 219-3200 <b>Fax:</b>		
<b>Site Name</b>		<b>EPA ID No.</b>	<b>Date of Interview</b>	<b>Interview Method</b>
Southern Shipbuilding Corporation Superfund Site			June 28, 2005	Received Via E-mail
<b>Interview Contacts</b>	<b>Organization</b>	<b>Phone</b>	<b>Email</b>	<b>Address</b>
Please return completed interview form to Janetta Coats 214-665-7308 or the return address or email listed below.				
Michael Torres	EPA Region 6	214-665-2108	torres.michael@epa.gov	1445 Ross Ave, Suite 1200 Dallas, Texas 75202
Janetta Coats	EPA Region 6	214-665-7308	coats.janetta@epa.gov	1445 Ross Ave, Suite 1200 Dallas, Texas 75202
<b>Purpose of the Five-Year Review</b>				
<p>The purpose of the five-year review is to evaluate the implementation and performance of the remedy, to confirm that human health and the environment continue to be protected by the actions performed. The second five-year review for the Southern Shipbuilding Corporation Superfund site focuses on the addressing contamination within OU1 and consolidation and capping of contaminated soils and ash at the site for excavation and incineration.</p> <p>Future land use at the site is not yet decided, and future land use may potentially affect the remedy. The remedy was based on future land use of light industrial in accordance with City of Slidell zoning requirements, without intrusive activities within the area of the cap.</p>				
<b>Interview Questions</b>				

1. What is your overall impression of the project?

**Response:** I think the project has gone very well.

2. Have there been routine communications or activities (site visits, inspections, reporting activities, etc.,) Conducted by your office regarding the site? If so, please give purpose and results.

**Response:** The site is visited twice a year by LDEQ and we meet with the EPA at the site at least once a year.

3. Have there been any complaints, violations, or other incidents related to the site requiring a response by your office? If so, please give details of the events and results of the responses.

**Response:** None

4. Do you feel informed about the site's activities and progress?

**Response:** Yes

5. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

**Response:** No

6. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, or emergency responses from local authorities? If so, please give details..

**Response:** Not aware of any issues relating to the site.

7. Do you feel well informed about the site's activities and progress?

**Response:** Yes

8. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

**Response:** No. Everything seems to be ok at the time.

<b>Five-Year Review Interview Record</b> Southern Shipbuilding Slidell, Louisiana		<b>Interviewee:</b> Steve Siegler <b>Affiliation:</b> Property Owner <b>Phone:</b> (504)522-7077 x101 <b>Fax:</b>			
<b>Site Name</b>		<b>EPA ID No.</b>		<b>Date of Interview</b>	<b>Interview Method</b>
Southern Shipbuilding Corporation Superfund Site				May 16, 2005	Individual Interview
<b>Interview Contacts</b>	<b>Organization</b>	<b>Phone</b>	<b>Email</b>	<b>Address</b>	
Please return completed interview form to Janetta Coats 214-665-7308 or the return address or email listed below.					
Michael Torres	EPA Region 6	214-665-2108	torres.michael@epa.gov	1445 Ross Ave, Suite 1200 Dallas, Texas 75202	
Janetta Coats	EPA Region 6	214-665-7308	coats.janetta@epa.gov	1445 Ross Ave, Suite 1200 Dallas, Texas 75202	
<b>Purpose of the Five-Year Review</b>					
<p>The purpose of the five-year review is to evaluate the implementation and performance of the remedy, to confirm that human health and the environment continue to be protected by the actions performed. The second five-year review for the Southern Shipbuilding Corporation Superfund site focuses on the addressing contamination within OU1 and consolidation and capping of contaminated soils and ash at the site for excavation and incineration.</p> <p>Future land use at the site is not yet decided, and future land use may potentially affect the remedy. The remedy was based on future land use of light industrial in accordance with City of Slidell zoning requirements, without intrusive activities within the area of the cap.</p>					
<b>Interview Questions</b>					



1. What is your overall impression of the project?

**Response:** The remedy appears to be completed. I would like to move forward and take the site into the re-development stage. There appears to be some obstacles to prevent the progress of re-development.

1. a) What obstacles are you referring to? The EPA has made promises to me and you have not kept your word on providing me with some help in carving out the areas within the site that need to be addressed. Diana Hinds and Mike McAteer were supposed to help me with this.

1. b) Aside from this matter, what is your overall impression of the project. It's a great site and I would like to develop it, for a win-win situation for the community of Slidell and myself.

2. Is the remedy functioning as expected? How well is the remedy performing?

**Response:** Yes. To the expectation of the ROD

3. Are you aware of any ongoing community concerns regarding the site or its administration?

**Response:** None

4. Is there a continuous on-site O&M presence? If so, please describe staff and activities. If there is not a continuous on-site presence, describe staff and frequency of site inspections and activities.

**Response:** Yes. My employees conduct routine maintenance at the site. The COE also has a key to access the site; they conduct activities. O&M records will be provided to EPA.

5. Have there been any significant changes in the O&M requirements, maintenance schedules, or sampling routines since start-up or in the last five years? If so, do they affect the protectiveness or effectiveness of the remedy? Please describe changes and impacts.

**Response:** No changes. I have continued to clean up the site. I have spent approx. \$1M out of pocket expenses. (The RPM requested copies of Mr. Siegler's O&M records.)

6. What is the status and effectiveness of the institutional controls (IC) at your site?

**Response:** I am aware of ICs as stated in the ROD.

7. Are you willing to implement the necessary institutional controls, in order to move your proposed redevelopment plans forward?

**Response:** I would like to again request help to define these ICs and walk thru the process to implement these. I will implement these ICs as written. However, I am concerned with attaching these ICs to the Deed when selling the property. I have some concerns that these ICs could divert perspective purchasers.

8. Are there any local community expectations or concerns about future land use/redevelopment at the site?

**Response:** I had a somewhat negative relationship with the SWAMP representative. But, a good deal of this was due to mis-perceptions. Also, comments were made about me that are not related to the site or the redevelopment proposals. Once plans are set in place to redevelop, I can hold public meetings to inform the community about my plans, if necessary.

9. Have there been opportunities to optimize O&M, or sampling efforts? Please describe changes and resultant or desired cost savings or improved efficiency.

**Response:** No opportunity to optimize

10. Do you have any comments, suggestions, or recommendations regarding the project?

**Response:** I would like for EPA to conduct another site-related Risk Assessment. I would also like for EPA to make good on promises made by the previous RPM and Re-Use Coordinator to carve out OU1 and OU2.